



# PEETERS

---

THE WORDS FOR 'BEET' IN THREE INTERRELATED SYSTEMS : GRECO-ROMAN, ARMENIAN AND ARABIC

Author(s): John A. C. Greppin

Source: *Byzantion*, 1990, Vol. 60 (1990), pp. 145-163

Published by: Peeters Publishers

Stable URL: <http://www.jstor.com/stable/44171962>

## REFERENCES

~~Linked references are available on JSTOR for this article:~~

[http://www.jstor.com/stable/44171962?seq=1&cid=pdf-reference#references\\_tab\\_contents](http://www.jstor.com/stable/44171962?seq=1&cid=pdf-reference#references_tab_contents)

You may need to log in to JSTOR to access the linked references.

---

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



Peeters Publishers is collaborating with JSTOR to digitize, preserve and extend access to *Byzantion*

JSTOR

## THE WORDS FOR 'BEET' IN THREE INTERRELATED SYSTEMS : GRECO-ROMAN, ARMENIAN AND ARABIC

In earlier times, the beet was not culinarily esteemed, nor was this vegetable particularly valuable as a component in pharmaceuticals, the other important use to which plants were put. This was true not only for the Greeks and the Romans, but it was also the thinking of other contiguous cultures. The Arabs and the Armenians to a great extent found the beet only somewhat appealing. In those times it was primarily the greens of the beet that were eaten. When the root itself was the object of one's appetite, it was usually specially stated. Principally the ancients considered the white beet just barely palatable, the black beet, causing indigestion, was for the most part uneaten. It seems plausible that what was referred to as the 'white beet' is what we now call 'swiss chard (*Beta vulgaris* L.)' a plant eaten solely for its greens ; the 'black beet' (*Beta vulgaris* L. var. *rapa* Asch.), as it was then called, is the variety whose root we now use, and which is deep red in color. The Armenian and Arab use of the beet in the preparation of pharmaceutical concoctions is similar to the Greco-Roman use, but this is largely because they derived much of their medical thinking from the ideas of Galen, Dioscorides, Paul of Aegina and Oribasius. If we were to find out about the use of the beet in Greek and Roman literature, we would first go to the natural historians, such as Theophrastus and Pliny the Elder ; to the physicians, such as Galen, Dioscorides, Paul of Aegina and Oribasius, and to the sole surviving cookbook of Roman times, the *De re coquinaria* of Caelius Apicius. Also of interest would be the works of Cato on agriculture, and the *Cena Trimalchionis* of Petronius, for an abundance of foods was noted by that writer who parodied Greek romances. There would be other sources, particularly among writers of comedies.

Theophrastus mentions the beet along with other root crops, and he describes them as fleshy plants that respond well to

cultivation (ὁμοίως δὲ καὶ ἐπὶ τῶν τεύτλων· καὶ γὰρ ταῦτα λαμβάνει μέγεθος [*Historia plantarum* 1.3.2, and see also 1.6.7, 7.2.8,]); and he notes that their seeds keep well, though not saying how the seeds were used. He also observes (7.4.5) that there are two kinds of beets, the white (τὸ λευκόν) and the black (τὸ μέλαν), the former having a better flavor. Pliny the Elder (23/24-79 AD) repeats, almost verbatim (*eius quoque a colore duo genera Graeci faciunt, nigrum et candidius* [*Naturalis historia* 19.132]), the comments in Theophrastus 7.4.5, though he notes an array of healing properties: the juice of the dark beet helps snake bites, dandruff, dysentery, chilblains, toothaches, headaches and dizziness (*sucus eius capitis dolores et vertigines [tollunt, etc.]* [20.69]). It is also helpful against the tape worm. The white beet heals burns, rids one of pimples while its juice, mixed with honey, is a useful irrigant for compacted mucus in the nose (*sucus eius cum melle naribus inlitis caput purgat* [20.71]). As an item for the gourmand, the beet found only occasional favor. It is noted in six sections in *De re coquinaria*, the Roman cookbook of Caelius Apicius, who tells us tiny beets should be cooked in fish water with peppers, fresh leeks and cumin (*Betas minutas et porros requietos elixabis, in patina compones, teres piper, cuminum, suffundes liquamen* [3.2.1-3]). And in Petronius there is a brief mention, placing the beet (which arrives in a bundle [*fascemque betae* {56.9}]) next to viandic exotica: mice, frogs, odd fishes, etc. (1). Catullus portrays the beet obscenely when noting the sexual inadequacy of a certain husband, whose member hangs more soft than a boiled beet (*Languidior tenera cui pendens sicula beta* [67.21]). But saintly old Cato (*De agri cultura*) finds value in the beet complete with root, as a purgative, when, along with ham hocks and cabbage leaves, some exotic ferns and other plants, they are added to boiling water (*betae*

(1) Actually, part of the humor of this description of Trimalchio's feast is the very conventionality of Trimalchio's menu. And to have a dish included at Trimalchio's table is, upon examination, not a mark of splendor, but rather suggestive of the narrow vision of a man, who though now rich, is still shackled to the mores of the middle class. For some precise comments on Trimalchio's menu, see Schmeling 1970 (and I should here thank Gareth Schmeling for his numerous helpful comments on Roman food; and thanks as well for the helpful criticism of John Scarborough and Emilie Savage-Smith).

*coliculos duos cum radice sua* [158.1]). But Cicero, in his *Epistulae ad familiares*, replies quite to the contrary, noting that he once used beets and mallow to stop diarrhea, the result of eating too many fancy dishes at a banquet (*tanta me διάρροια arripuit, ... a beta et a malva deceptus sum* [*Fam.* 7.26.2]). In Greek literature the term τεῦτλον (or σεῦτλον) is rather obscure outside of medical literature. Odd uses occur, though, and ταῦτλον appears three times in the fragments of the Attic comedians. Eubulus is recorded by Athenaeus Epigrammaticus in the *Anthologia Graeca*. Athenaeus himself notes that an eel, wrapped in beet (greens), is good to eat (ὅτι δ' ἤσθιον τὰς ἐγχέλεις καὶ μετὰ τεύτλων ἐντυλίξαντες [35]), and quotes Eubulus saying that, at a banquet, fair-skinned, unmarried girls brought forth an eel, the body covered around with beet (greens) (νύμφα ἀπειρόγαμος τεύτλωι περὶ σῶμα καλυπτὰ / λευκόγχρως παρέσται / ἔγκελυσ [37]). Elsewhere, in the comic fragments, we read again how well the eel goes with beet greens (καὶ μὴν παρῆν τεμάχη μὲν ἐξωπτημένα / καταχυσματίοισι παντοδαποῖσιν εὐτρεπῇ / τεύτλοισί τ' ἐγκέλεια συγκεκαλυμμένα [Pherecrates 108.10-11]). Antiphanes, though, does not speak of eels, but prefers the tuna fish ; and it is wrapped not in beet greens, but served with slices of what must be the beet root (τῆς τε βελτίστης μεσαῖον θυννάδος Βυζαντίας / τέμαχος ἐν τεύτλου λακιστοῖς κρύπτεται στεγάσμασιν [181]). From these few passages we can see that the beet was of little actual importance to the Greeks ; it was even a slightly comic plant. The Romans, though, could take it a bit more seriously, even if it became fodder for the jokes of Petronius and Catullus.

More specific attention is afforded by the ancient physicians, Galen and Dioscorides. These two authors are particularly of interest because it was their ideas that were later transmitted to the Armenians and Arabs. Dioscorides (1st century AD) devotes a full entry to the beet (he uses the Hellenistic form σεῦτλον), also noting (II, 123) that there are two types, the black and the white (μέλαν καὶ λευκόν), and also implying that the leaves were more commonly eaten than the roots. The black beet tends to be more binding (σταλτικώτερον κοιλίας [II.123.8-9]), he said, but the white is good for the belly. The beet juice is noted as being bad since it contains an abundance of niter. By this the ancients probably meant various alkalis, principally soda, an observation

made some time ago by Francis Adams (1844.III.371). However, this juice, mixed with honey, purges one's head of phlegm (ὁ χυλὸς αὐτῶν καθαίρει κεφαλὴν ῥινὴ ἐγκεόμενος μετὰ μέλιτος καὶ ὠταλγίας ὠφελεῖ [II.123.11-12]), and reduces ear-aches, as Pliny also said. Galen (129-210 AD) deals, in his *Simples*, with the beet more briefly than Dioscorides, noting also that it contains niter, that this is valuable for reducing mucus, and promotes perspiration (γίνεται δ' ἀφλεγμάντου δυνάμεως καὶ ἀτρέμα διαφορηατικῆς [Kühn XII.138]), ideas that are found partly in Pliny and Dioscorides ; the white beet is stronger for these purposes than the black, which is astringent, though these properties are more common in the root than in other parts. Galen also notes, in his *De alimentorum facultatibus*, that the root has more value for nourishment than the leaves (εἰ δὲ καὶ τεύτλου ... ἐθέλοις παραβάλλειν τὴν ῥίζαν τοῖς φύλλοις, ἰσχυροτέραν εὐρήσεις τὴν δύναμιν [Kühn VI.646]). And, as noted also in his *Simples*, he states in Hippocrats *De humoribus*, that the beet is helpful for loosening phlegm (καὶ ἀποφλεγματισμὸς δὲ χρήσιμός ἐστι μετὰ τὴν τοῦ ὅλου σώματος κάθαρσιν, οὕτω καὶ τὰ ἔρρινα [Kühn XVI.148]). He also says (*De compositione medicamentorum*) that the beet, like certain other foods, is easy on the stomach (τροφὰς δ' ἀρμοδίους τοῖς στομαχικοῖς τὰσδε δοτέον· τεύτλον ... κτλ. [Kühn XIII.173]).

A later use by the Byzantine physician Oribasius (320-400 AD) mentions the affects of the beet for scalp problems : cooked or raw, the beet (juice), applied to a shaved head, rids the sufferer of dandruff scurf, shingles and herpes (Καὶ ἐφθὸν καὶ ὤμὸν τεύτλον ἀχῶρσί τε καὶ ἔρρησι καὶ λειχῇσι καὶ πιτύροις, ἣν προαποξυρῆς τὴν κεφαλὴν, ἐπιπλαττόμενον ἀρμόζει πάνυ [Raeder IX.53]).

From these unenthusiastic descriptions of the use of the beet, its root and its leaves, it seems clear that this vegetable held little charm to the Greeks and Romans, neither for its use as food, nor for its use as a medicament. If it soothed any illness, there was another plant that did it better <sup>(2)</sup>.

(2) Galen wrote a lengthy essay on substitutes (*De succedaneis*), plants or minerals that could be used when the particular item wanted was unavailable. Significantly, neither the beet root nor the leaves are used as substitutes though

Armenian mention of the beet is more complex because there are a plurality of terms for the beet. One word, apparently early, is *čakndet*, and it is used strictly for beet only ; a second word, *bazuk* is also consistently used for the root of the beet, and there are two other words, *banjar* and *silx*, the semantic range of which is often more varied. But *čakndet* is surely a beet in its earliest usages. Derived by loan from Persian *chugundar*, it remodeled its final syllable to an Armenian shape (*det* 'plant'). It appears in the Bible (*Is.* 51.20), where the Armenian and Septuagint versions share a rather bizarre use. The Armenian states : "Your sons have fainted, and it is they who lie at the juncture of every highway like half-cooked beets" (*ibrew zčakndet kisepe'ey*). This corresponds to the Greek, from which the Armenian was derived <sup>(3)</sup>, where we read an absolutely similar ὥς σευτλίον ἡμίεφθον ! Arm. *čakndet* nowhere else appears in the literature of the Golden Age <sup>(4)</sup>, nor in the literature that immediately follows it ; nor is it used by the tenth century poet Nerekatsi whose interest in archaic vocabulary was well known <sup>(5)</sup>. However, it does appear in the undated <sup>(6)</sup> *Bark' Gatianosi*, the so-called

the seed is listed once (Kühn XIX.735), as a substitute for the *λωτός* (alas, it is impossible to guess what now is meant here by *lotus* as a botanical term, though it could be anything from a type of nettle to Italian melilot).

(3) The Armenian Old Testament was clearly not derived from the Hebrew, a point made by Macler (1927) that has survived every test ; and it is also unclear if the Syriac Peshitta played any role ; the principal source was the Greek Septuagint. The Hebrew for this curious passage is considerably different from the Septuagint, where we read *ktū' mikmar* 'as a wild bull in a net'.

(4) Since Arm. *čakndet* is otherwise unknown in the literature of Classical Armenian, not appearing elsewhere till the medieval period, it is possible that *čakndet* is wrong here, coming in erroneously as part of a much later redaction.

(5) Narekatsi would use, in his *Book of Lamentations*, words known only in the earliest period of Armenian literature, consciously reviving lost vocabulary. Here see GREPPIN 1980.

(6) There is no sure way to date this bilingual dictionary, but it is the received tradition that it was composed in the sixth century. This conjecture is not without merit since that century produced an enormous amount of translations from the Greeks, works including Plato, Aristotle, Philo the Hebrew and others. Yet it is implied that if there is a Greek-Armenian lexikon to the pharmacological terms of Galen, then Greek originals of Galen's works must have been available. There is, alas, no evidence of this in the Armenian

*Galen Dictionary*, a list of Greek plant names with Armenian glosses. There we read the entry *σεῦτλον* — *čakndet* (7). However, in a tenth century agricultural manual, the *Girk' vastakoc'* — often referred to as the Armenian *Geoponica*, we read that the wild beet root, when ground and mixed with water, is nourishing (*vayri čakn[d]ehuk ... cecea, ew zjurn and berann xmc'o, ōgtē* [1877.218 § 320]). Elsewhere in the *Geoponica* we read that the beet works as a laxative (*Ew albeln ayspēs lini* [1877.218, § 320]) and that it irritates the urine (*ew jurn zgozn yordorē* [1877.167, § 261]). And the twelfth century writer of fables (8), Mkhitar Gosh, reinforces the notion that the beet root is an uncommonly eaten vegetable. In Fable § 50, a bevy of garden vegetables and fruits gather around and insult the beet, exclaiming “that it is very harsh and irritates the stomach” (*et'ē sastik amenewin ē, ew goč'ot orovayni* [1854.51]), a view, as we shall see, common among Arab physicians as well. And it is clear that it is the root that is being discussed, rather than the greens, since the other vegetables involved are also root crops : the turnip, carrot and cyclamen. The famous physicians of the same age, Mkhitar Heratsi, notes the beet and tells us in his *Treatment of Fevers* (1832.117) that beet water, mixed with a variety of other materials (camomile, bran, fenugreek and caltrops wrapped in linen as well as dried figs, baker's borax, sugar and sesame oil), provides a useful irrigant to soften compacted mucus (*huknac' kakut vasn pallami* [1832.117]). This perscription harks back, of course, to the comments made in Pliny's *Natural History* (19.132) and the passages noted in Galen's *Simples* and in Dioscorides mentioned above. The 15th century Armenian physician, Amirdovlat, an

writings of that time, nor has any Greek version of any Galenic text been found in Armenian areas, and none are known in the great manuscript collections in Yerevan, Venice, Vienna or Jerusalem. It thus remains a mystery to what exact purpose the *Bark' Galianosi* was put.

(7) According to the Kühn edition of Galen, both the standard Attic *τεῦτλον* and the Hellenistic *σεῦτλον* were used.

(8) At first it would seem odd that a compiler of so serious a work as a law code would produce something so frivolous as a collection of fables. Yet it has successfully been shown that these fables are but metaphors illustrating the laws that Mkhitar Gosh had earlier and more formally compiled.

author of considerable appeal, compiled a gigantic book of Simples <sup>(9)</sup>, a book with 3754 alphabetical entries. There *Arm. čakndet* rates less than one line and no pharmaceutical use is included ; Amirdovlat notes only that "some say that it is *the č'k'ntur*" (this would be after the Persian spelling *čukundur*) "and others say the *bazuk*" (1926.330, § 1935). It is likely that, by the late medieval period, *čakndet* was no longer as actively used.

The term *bazuk*, a word that normally means 'forearm, arm,' seems, in the medieval period, to mean 'beet root' in certain restricted contexts. In the *Geoponica*, the brief section dealing with the *čakndet* has a title : "Concerning the beet, which is the *bazuk*" (*Vasn čakndet, or ē bazuk* [1877.167, § 261]). But though the reference is obscure, and perhaps dialectal, there are at least two other instance of the use of *bazuk* in this way. A passage in Mkhitar Heratsi (1832.83) shows that *bazuk* 'forearm' has come to stand for the root of the beet and is a way of distinguishing that part from the greens. There we read of the "forearm of the *čakndet* (*čakndti bazuk*), and it is apparent that *bazuk* is not a new word, homonymic with *bazuk* 'forearm', but rather simply a new metaphoric use of *bazuk* 'forearm'. A later recorded use is in Amirdovlat where we read a brief but complete entry : *silx or ē bazukn* (1926.528, § 3149), identifying the term *bazuk* with *silx*, from *silq*, an Arabic word for 'beet'. It is significant to note that Amirdovlat's main entry for the beet is placed under *bazuk* ; the terms *silx* (1926.103, § 565) and *čakndet* (1926.330, § 1935) merely refer the reader to that word. Amirdovlat is indeed writing ultimately under the spell o the Greeks, as their thought was transfered to the Armenians through the medium of Arabic, for he writes that the *banjar* is *tak' u č'or* "hot and dry" (1926.103 ; § 565), a formula for categorizing the medicinal plants that was

(9) Though an entirely satisfactory Armenian editon was edited by K. J. Basmadjian, a French-Armenian physician who also wrote on other aspects of Armenian medicine (1925, 1930), no translation has yet been published. A Soviet scholar (Vardanyan 1987) has prepared a commentary on Amirdovlat and his *Angitac' anpēt* ("Useless for the Ignorant") ; an English translation with a commentary is underway by John Gueriguian M.D. of the U.S. Food and Drug Administration.



first expressed by Hippocrates<sup>(10)</sup>, considerably developed by Aristotle and further refined by both Galen and Dioscorides<sup>(11)</sup>.

Arm. *banġar* is a term that stands indeed for the beet root, and the greens of the beet, but the word becomes more complicated since it also can stand for edible greens of any type, or even vegetables in general, not just the beet. This diversity is clear in the *Fables* of the twelfth century lawgiver. Mkhitar Gosh who notes this difference when the 'beet' (*ĉakndet*) is placed as ruler over the other vegetables (*ĉakndet i veray banġaroc'* [1854.51]). Arm. *banġar* appears twenty-two times in the Bible, and is frequent throughout Armenian literature, from the fifth century to the present where it still maintains the meanings of the beet root specifically, and beet greens as well as other greens without specification, and quite often functions as a general term for vegetables. In numerous passages in the Bible it appears in the phrase *banġar xotoy*, as a calque on the *Septuagint βοτάνη χόρτου* (*Gen.* 1.11, 12 ; 9.3) 'plant greens'; and as a term for most any vegetables, a garden plant (Arm. *parġez banġar* = Gk.

(10) The idea, as expressed by Hippocrates, was that man was composed of hot and cold, wet and dry ; when he died, his body decomposed and these elements returned whence they came, hot to hot, etc. (*τὸ θερμὸν πρὸς τὸ θερμὸν, κλτ.* [*On the Nature of Man* L vi 36 17]). This particular treatise was known to the Arabs, having been translated by Hunain ibn Ishāq (9 th. C.) and is available now in an edition by Mattock (1968). There *τὸ θερμὸν πρὸς τὸ θερμὸν* is reasonably reproduced as Arabic *al-hārr alī al-hārr* (1968.5).

(11) The theory of hot and cold, wet and dry, was best developed, as an abstract, by Aristotle, an analysis of which can be found in Lloyd 1964. Aristotle, writing in *De generatione et corruptione* (329b 26ff.) states that *τὸ θερμὸν* is "that which combines with things of the same kind"; *τὸ ψυχρὸν* is "that which brings together and combines things of the same kind"; *τὸ ὕγρὸν* is "that which, being readily delimited is not determined by its own boundry"; and *τὸ ξηρὸν* is "that which, not being readily delimited, is determined by its own boundries". The application to medicine is straightforward and Lloyd notes Hippocrates stating that "pain is caused both by cold and by hot, and both by what is in excess and by what is in default". From there it would logically follow that all one must do, to obtain an agreeable stasis, would be to provide the logical opposite for what is in excess or default. Different plants and minerals were able to provide this in varying ways, certain remedies working better for some excesses or defaults than others ; it was the skill of the physician to determine what was in default and what was in excess, and to find the appropriate antidote that would restore health.

κῆπος λαχανείας [Deut 11.10]). We also see it used loosely for greens in the phrase *banġar vayri* (Gen.. 2.5, 3.18, Job 5.25) 'wild beet' <sup>(12)</sup>, which replaces the biblical *χλωρόν* 'greens'. Uses similar to this are abundant in other fifth century authors: Yeznik used the term as for herbage, vegetables and legumes, and even refers to vegetarians (*banġar ewet' ker* (1826.286 = 1959.531, § 409). Lazar Parpetsi notes the sweetness of the *banġar*, and here he must be talking of the root of the beet <sup>(13)</sup> when he writes of "the honey-flavored sweetness of beets" (*zmetraham k'atc'rut'iwn banġarac'n* [1904.9]). In Agathangelos the *banġar* is little more than a weed, for we read of a "worthless growth of grassy plants" (*tarapart ačumn sizaboys banġaroc'n* [1909.257]).

In Koriwn's fifth century biography of Mesrop Mashtots we discover that it is agony to eat *banġar*, reading how Mesrop "subjected himself to all types of spiritual disciplines — solitude, mountain dwelling, hunger, thirst and *banġaračašakut'iwn*" ('feeding on *banġar*' [1941.38]). This same point is made by Eusebius of Caesarea, who, in his *Church History*, notes that the *banġar* "works a contamination on the eater" (*apakanut'iwn gorcēr yuteln* [1877.689]). Faustos is one of the few authors who refers unequivocally to the root of the beet, mentioning it specifically, *armatk' banġaroc'* (1883.33), and notes the dreadful state of those who ate only the *banġar* and water (1883.188). Curiously, Amirdovlat, who mentions that *bazuk*, *čakndeł* and *silx*, does not use anywhere the word *banġar*.

A final Armenian term is *silx* <sup>(14)</sup>, taken directly from the

(12) To help explain the popularity of beet greens, one could note that the still popular swiss chard (actually the white beet) is, in the Linnaean system, *Beta vulgaris* L., while the red beet differs only subspecifically (*B. vulgaris* L. var. *rapa* Asch.). In Arabic the association is more obvious in their names, swiss chard being *barri banjar*, literally 'wild beet', while the cultivated beet is simply *banjar*.

(13) In its uncultivated state, the beet has a 2% sugar content, but this may be increased as high as 15-20% under cultivation.

(14) Although this term was, and still is, part of the Armenian lexicon, it has always been understood as a foreign term. It seems to be ignored by lexicographers of the Classical language, being absent in the formidable *Nor bārgirk' haykazean lezui*. It is further unlisted in Malkhaseants (1944-1945) and Aghayan (1976). The term is pronounced, in Western Armenian, not as Amirdovlat wrote it (*silx*), but rather as *silāek*, with the final -k reduced almost to a glottal stop [*qilā*], reflecting the colloquial Lebanese dialect.

Arabic *silq*, and of rather late appearance. It appears only in Amirdovlat, and is identified as an Arabic word, but none the less a word that would be understood in Armenian <sup>(15)</sup>.

It appears in four entries :

3146. *silx čapali* (= Ar. *silq jabali* 'mountain beet' [= *Rumex alpinis* L., sorrel]).

3147. *silx al may* (= Ar. *silq al-mā* 'water-beet' [*Potamogeton natans* L., pondweed]).

3148. *silx al parri* (= Ar. *silq al-barri* 'wild beet' [*Beta silvestris*, wild beet]).

3149. *silx. or ē bazuk* (Ar. *silq* 'beet' [*Beta vulgaris* L. var. *rapa* Asch.]).

Only one of these entries is more than a single line long ; sometimes Amirdovlat makes a reference to heat and moisture, but except for the mountain beet (= sorrel), there is no description ; and since *silx čapali* 'sorrel' is not part of this study of the beet, we will deal with it no further.

In Arabic culture we find a continuation of those ideas which are expressed in Greco-Roman culture, and which are the foundations of Armenian medicine. Alas, there are no well-known sources from which it is easy to discover the way Arabs used the beet for food, but there are numerous pharmaceutical lists, especially those by al-Biruni, Ibn Sina (Avicenna), and Rāzī (Rhazes). There is also a marvelous botanical hand book which lists the beet among a total of 1120 plants. In medieval times the Arabs used the word *silq* (or *salq*) as their sole term for the beet. In modern times there came some change, and most contemporary botanical handbooks cite *banjar* as well, an unusual word since *banjar* must necessarily have come to Arabic as a rare loan from Armenian <sup>(16)</sup>. Of this we can be sure since

(15) The Arab invasion of Armenia was in 651, and the infiltration of Arabic lexical items started rather rapidly after that. Pharmaceutical vocabulary came in when the Arabs, following Rhazes, began to develop a medical system that was superior to the Greco-Roman system of Galen ; we might hazard that this pharmaceutical vocabulary began its infiltration in the tenth or eleventh century. For some specific examples, see GREPPIN 1986.

(16) The Armenian word was quite active, and went to other languages beside Arabic, for we have Turkish *bancar* and Greek *παντζάρι*, also with the meaning 'beet'.

the Armenian word *banġar* <sup>(17)</sup> is known in that culture from the earliest literature, a good two hundred years before the Arab invasion of Armenian and the commencement of what was to be a rather large Arabic intrusion.

In the *Kitab al-nabāt* by Abū Hanīfa al-Dīnawarī (ninth century) there is, according to the index, no mention of *banġar* though *silq* receives a most brief mention when it is identified as a plant (actually a type of cabbage !) to which the reader is then referred (*rāji' kurunb fī ħarf al-kāf* [1973.45, § 532]). This indifference to the beet is consistent with what we note in Armenian and Greco-Roman culture.

Rhazes (Abū Bakr Muhammad b. Zakarīyā' al-Rāzī, 865-970), though Persian by birth, wrote his medical works in Arabic. He left us an enormous œuvre that in its current published form in Arabic (Khan 1951-1974), continues for twenty-five volumes. Rhazes examined and wrote on almost all aspects of medicine : diseases of the head, eye, stomach, the urinary system, and so forth ; on inherited disorders, and a splendid study of the pharmacopia such as was available in his time. Rhazes became well known in late medieval Europe as well, and his work was soon translated into both Latin and Greek. Rhazes was familiar with the medicinal writings of both Dioscorides and Galen, probably through the translations from Greek, via Syriac, of Ḥunain ibn Ishāq <sup>(18)</sup>. He was also among the first to see smallpox as a disease separated from measles, and his description of that (*Fī al-judarī wa al-ḥaṣba*) was considered still of interest as late as the mid-nineteenth century when it was translated into English (Greenhill 1847).

(17) According to the handbook of plant names by Bedevian (1936), *banġar* beets are the wild beet (*Beta silvestris*) and the common beet (*Beta vulgaris* L. var. *rapa* Asch.) ; a *silq* (*salq*) beet is the white beet or swiss chard (*Beta vulgaris* L) and the leaf-beet (*Beta vulgaris* var. *folliosa* A. Sf.). This covers the standard species and sub-species of beet in Europe and the Middle East. It is curious to note that though *silq* is present in the pharmaceutical list of Steinschneider (1898.97), *banġar* is nowhere listed (1897.320 vacat).

(18) The Arabic versions of Galen and Dioscorides were produced by Ḥunain ibn Ishāq, about 840 AD, though it has been suggested that it was Ḥunain's nephew, Ḥubaish ibn al-Ḥasan, who actually did the translating from Greek, but into Syriac, and Hunain went forth from there, into Arabic. Certainly Ḥunain is the better known, and more influential (Bergstrasser 1925).

Rhazes had much to say on the beet, and much of it was original. He first noted what was well known : that there were two varieties, white and black ; that it contained niter and that it was successful in the treatment of alopecia<sup>(19)</sup> (*wa yaḍmudu bihi da' al-tha'lab ba'da ḥakkah wa al-qarūḥ al-khabītha* [1968.63]). He noted, along with Galen (Kühn VI.630), that it opened obstructions of the liver (*al-kabid* [1968.64]) and that with vinegar it unplugged an obstructed spleen<sup>(20)</sup>, *falā aqall min an ya'kulu ma'a khall wa huwa dawā' balīgh li-man kāna ṭihālhu 'alīlan min sadad idhā akala 'alā mā waṣaftu* [1968.65] ; further the beet was successful in treating several diseases of the skin and, happily, disposed of fleas. Rhazes followed the Greco-Roman tradition by stating that beet-water, mixed with honey, helped ear-aches (*wa lidhālīka yunaqqī 'uṣārathumā matā 'ista'āta bihā ma'a al-'asal, wa yanfā'u min waja' al-udhun* [1968.63], and continued the older idea that beet juice with honey relieved a stuffed-up nose ; and he agreed that the beet was harmful to the intestines (*wa yaldha'u almi'à wa al-ma'ida* [1968.64]). He notes that the beet was 'hot and moist', (*al-silq ḥarr raṭb* [1968.64]), an observation differing from Amirdovlat who said that the beet was 'hot and dry'. This opposing sentiment corresponds to the idea of Avicenna, whom, as we shall see, Amirdovlat probably used as a source. But this 'hot and moist' view of Rhazes is the earliest testimony about the heat and wetness of the beet.

The next great figure to deal with the beet was al-Bīrūnī (Abū Raiḥān Muḥammad ibn Ahmad, 973-1050†). He was not, as was Rhazes, a specialist in medicine : rather he was a polymath, born into a Turkik culture in Central Asia. His work covered, in an Aristotelian manner, astronomy, mathematics, philosophy, history

(19) The word *alopecia*, the term for a type of hair-loss, is derived from Gk. ἀλώπηξ 'fox', a species in which this disorder was commonly noted. The Arabic term is *dā' al-tha'lab*, virtually a calque on the Greek term. The beet plays no role in the treatment of alopecia in the Greco-Roman world. There Pseudo-Galen (*De remediis parabilibus* [Kühn XIV.326]) suggests that alopecia is treatable with pellitory (*Anacyclus pyrethrum* DC.) and stavesacre.

(20) Celsus (*De medicina* IV.16.2) notes that beets with mustard are most suitable for a swollen spleen (*At lien[is]... intumescit ; ... acida autem maxime conveniunt ; ... betae ex sinapi*).

and other studies, including pharmacology. His great work in that field, *Kitāb aṣ-Ṣaidana fī al-tibb*, is not a particularly original or thorough book, but it is compact and handy to use. In the style of Dioscorides, whose pharmacopia provided linguistic data as well, he traced the term 'beet' as said in various languages. He noted that the Romans say *īrūqūliyūn* <sup>(21)</sup> (sic) and *ṭarūṭalūn* (probably a corruption of *τεῦτλον*). He also gives, with somewhat more accuracy, Syriac *silqā*, but also adds a *shailūm*, which is otherwise unknown to me; for Persian he mentions *chukundur* (= Per. *chugundar*) and *ṣarbā*, the former being known, the latter not. He continues in a Dioscoridac vein, quoting him directly, and with acknowledgement, that the black feet is astringent, though the white has many uses. Neither, though, is good for the digestion, but the juice of them both, mixed with honey, clears the head, and helps ear aches (*wa 'uṣārathumā idhā su'it a bihā bi-mā' al-'asal tunaqqī al-ra's wa tanfā'u min waja' al-udhun*, [1973.228]), a view stated earlier by the Greeks and the Romans, and by Rhazes. And, as Oribasius partially noted, it helps scalp disorders, such as dandruff and dryness (*wa ṭabīkh waraq al-silq wa aṣlhu idha ghusil bī-hi al-ra's qala'a al-ḡabār wa naqiya al-nukhāla* [1973.228]). There is also some assistance for other diseases of the scalp, for alopecia and pityriasis, a disease that brings about flaking of the skin (*ṣaqāq* sickness [1973.228]).

So said al-Bīrūnī on the beet. Avicenna (Abū 'Alī al-Ḥusain ibn 'Abdallāh ibn Sīnā), a man of Tajik origin and born in Bukhara (980-1037), provided a description of the beet that is more thorough than that of al-Bīrūnī, though less complete than the observations of Rhazes. We find an abundance of ideas, a few of which are apparently original developments, independent of the Greco-Roman tradition and Rhazes; others continue earlier the older tradition. Conventionally, he says that the beet is bad for the digestion because of the excess of niter (*nītrunīyā*

(21) I cannot imagine what al-Bīrūnī was thinking of when he recorded *īrūqūliyūn*. The sizable work on Latin plant names, by Jacques André (1956) has nothing that would correspond to it. So often in transliterating from one script to the other, Greek to Arabic, Latin to Syriac, etc., the original term would be greatly distorted after only a few copyings. The Armenian *Bārē Gaḡianosī* contains Greek words in Armenian script that are so distant from the original that they simply cannot be identified.

[1877.378]), a fact stated by earlier pharmacologist ; he notes, as did Rhazes, that beet-juice will remove fleas (*barāghīth* [1877.387]) and heals alopecia (*tanfa'u 'uṣārathu wa ṭabīkh waraqhu min shiqāq al-bard wa yanaf'u min dā' al-tha'lāb* [1877.387]). Mixed with honey it cleans the ears and the nose (*bi-l-'asal ... yamfa'u qurūḥ al-anf mā'hu fātiran yuqaṭtiru fī al-udhun fa-yusakkinu al-waja'* [1877.388]). Harking back to Cicero's comment that it aids diarrhea, Avicenna noted that, mixed with lentils (*'adas* [1877.388]), it aids the stomach. Avicenna differs with Rhazes, saying that the beet is "hot (and) dry" (*ḥarr (wa) yābis* [1877.387]), a view continued by Amirdovlat. I believe Avicenna was the only Arab physician to state specifically, along with Pliny and Galen, that although the beet was generally harmful to the digestion, when cooked with lentils, it was actually very helpful to the stomach. And, along with Rhazes, Avicenna notes that beet juice can rid one of fleas.

We might mention here Serapion Junior (Ibn Sarābiyūn), an Arabic scholar on medicine (11th century) whose writing now exists only in a Latin translation. Serapion is not particularly original, and he makes clear that he is quoting from Greco-Roman sources. He first notes Galen ; then Dioscorides, and then other less pertinent sources, such as the *Liber de agricultura*, which is perhaps the *Geoponica* and though Serapion claims to be confining himself to the ancient Greco-Roman sources, he does present material that is outside these writings. In his entry for Dioscorides, he notes that a concoction from the beet root will clean the head (*& qñ ex decoctione blete & radicis eius abluitur caput* [1550. section CXLVIII]), a view actually confined to the Arab physicians. Yet we know also that Serapion preceeded Rhazes (Rhazes mentions Serapion in his *al-Ḥawī* [Sezgin 1970.229]), and so Serapion must have got his material on the cleansing of the head from a medieval tradition that preceded Rhazes.

Examining all the Arabic references to the beet, we find few ideas expressed that are not to be found in the Greco-Roman tradition. The advantage to the Arabic studies is that they hold more information than any one of the Greco-Roman sources. Further, they are handier than Galen to use because Galen scattered his observations on the beet widely over a half dozen

different books. Both Rhazes and Avicenna managed to get a good sized compilation all in one area of their books on Simples. That this would be an improvement on the work of Galen is obvious. We can also observe, but only subjectively, that the writing of the Arab physicians was somehow more subtle, more finely tuned than the work of Galen and Dioscorides. The Arabs are much more aware of the healing power of beet juice for treating diseases of the scalp (it is Pliny and to a lesser extent Oribasius, in the Greco-Roman system, who noted that beet juice removed dandruff), but scalp disorders may have been more of a problem in the warmer Arab lands than in the more temperate central Mediterranean area. It is also surprising that Avicenna and Rhazes were the first to offer opinions on the heat and moistness of the beet, and though they differ on moistness (Rhazes stated it was moist but Avicenna said dry) they fill a significant gap in the medical science of that day. Thus it can easily be said that the Arabic views of the beet were at least a moderate advance over the Greco-Roman system. The Arabs continued almost all of the earlier views of Galen, Pliny and others, and they make clear, in the process, that the beet was surely an item of little importance to the Ancients, both for use in pharmaceuticals, and most surely for use at the table. To this latter, some of our young offspring would most surely agree.

*Cleveland State University.*

John A. C. GREPPIN.

#### BIBLIOGRAPHY

ADAMS, Francis.

1844-1847. *Paulus Aegineta : The Seven Books of Paulus Aegineta. Translated and with a commentary by ...* London, Sydenham Society.

AGHAYAN, Edward (Ałayan, Eduard Bagrati).

1976. *Ardi hayereni bac'atrankan bararan*. Two volumes. Yerevan. Hayastan hrat.



ANDRÉ, Jacques.

1966. *Lexique des termes de botanique en latin*, Paris. Libraire C. Klincksieck.

BASMADJIAN, K. J.

1925. "Publication des œuvres d'Amirdovlat". *Bulletin de la société française d'histoire de la médecine* 19.83-85.

1930. "Un manuscrit de Galien (?) en arménien". *Bulletin de la société française d'histoire de la médecine* 24.41-43.

BEDEVIAN, Armenag K.

1936. *Illustrated Polyglottic Dictionary of Plant Names*. Cairo. Argus & Papazian Presses.

BERGSTRASSER, G. 1925.

*Hunain ibn Ishâq : über die syrischen und arabischen Galen-Übersetzungen*. Leipzig. Abhandlungen für die Kunde des Morgenlandes ; herausgegeben von der Deutschen Morgenländischen Gesellschaft.

GREENHILL, William Alexander.

1847. *A Treatise on the Small-Pox and Measles by Abû Becr Mohammed ibn Zacarîyân Ar-Racezîce*. London. Sydenham Society.

GREPPIN, John A. C.

1980. "A Note on Arm. *bosor* 'Carnelian'. " *Revue des études arméniennes* 14.471-472.

1986. "Arab Pharmaceutical Terms in Middle Armenian". *Annual of Armenian Linguistics* 7.65-71.

LLOYD, G. E. R.

1964. "The Hot and Cold, the Dry and the Wet in Greek Philosophy". *Journal of Hellenic Studies* 84.92-106.

MACLER, Frédéric.

1927. "Les traducteurs arméniens ont-ils connu et utilisé l'hébreu". *Handes Amsoreay* 609-616.

MALKHASEANTS, St. (Malkaseanc', Step'anos).

1944-1945. *Hayerên bac'atrankan bararan*. Four volumes. Yerevan, Hayk, SSR petrakan hrat.

SCHMELLING, Gareth.

1970. "Trimalchio's Menu and Wine List". *Classical Philology* 65/4.248-251.

SEIDEL, Ernst.

1908. *Mechithar's des Meisterarztes aus Her : "Trost bei Fiebern"*. Leipzig. Verlag von Johann Ambrosius Barth.

STEINSCHNEIDER, Moritz.

1897-1899. "Heilmittelnamen der Araber". *Wiener Zeitschrift für die Kunde des Morgenlandes*. 11.1897.259-278, 311-330 ; 12.1898.1-10, 81-101, 201-229, 319-330 ; 13.1899.75-94.

SEZGIN FUAT.

1970. *Geschichte der arabischen schrifttums. Band III : Medizin — Pharmazie — Zoologie — Tierheilkunde bis ca. 430 H.* Leiden. Brill.

VARDANYAN, Stella A. (Стела А. Варданян).

1987. Амирдовлат Амасиаци — Армянский естествоиспытатель и врач XV в. Moscow. Nauka.

#### ANCIENT TEXTS

##### *Greco-Roman texts :*

The works are standard, and need no specification except for certain medical texts.

DIOSCORIDES.

*Pedanii Dioscuridis Anazerbei de materia medica*. Max Wellmann (ed.) Berlin. Weidmann. 1906 [1907] — 1914 Rpt. Berlin. Weidmann 1958.

GALEN.

*Claudii Galeni opera omnia*. C. G. Kühn (ed.). Leipzig. Libraria Car. Cnoblochii. 1821-1833. Rpt. Hildesheim. Georg Olms. 1964-65.

ORIBASII.

*Oribasii collectionum medicarum reliquiae*. Johann Raeder (ed.). Berlin. B. G. Teubner. 1928. Rpt. Amsterdam, Hakkert, 1964.

SERAPION JUNIOR.

*Liber de medicamentis simplicibus*. Venice. 1550.

##### *Armenian texts :*

AGATHANGELOS.

*Agat'angelay Patmut'iwn hayoc'*. Tiflis. Aragatip Mnac'akan Martiroseanc'i. 1909.

AMIRDOVLAT.

*Amirtovlat'i Amasiac'woy Angitac' anpēt*. Vienna. Mxit'aran tparan. 1926.

## EUSEBIUS OF CAESARIA.

*Ewsebiosi Kesarac'woy Patmut'iwn ekelec'woy*, Venice. I surb Łazar. 1877.

## FAUSTOS BUZAND.

*Paustosi Buzandec'woy Patmut'iwn hayoc'*. St. Petersburg. I tparani kayserakan čemaranin gitut'eanc', 1883.

## GALEN.

*Bark' Galianosi : The Greek-Armenian Dictionary to Galen*. John A. C. Greppin (ed.). Delmar, New York. Caravan Books. 1985.

*Geoponica*

*Girk' vastakoc' : Γεopovικά : Targmanut'iwn naxneac' yarabac'i lezuē*. Venice. I surb Łazar. 1877.

## KORIWN

*Koriwn : Vark' Maštoc'i*. Yerevan. Haypethrat, 1941.

## LAZAR PARPETSİ

*Łazaray P'arpec'woy Patmut'iwn hayoc' ew t'ult' ar Vahan Mami-konean*. Tiflis. Aragatip Mnac'akan Martiroseanc'i, 1904.

## MKHITAR GOSH

*Arakk' Mxit'aray Goši*. Venice. I surb Łazar, 1854.

## MKHITAR HERATSI

*Mxit'aray bžškapeti Herac'woy ĵermanc' Mxit'arut'iwn*. Venice. I tparani srboyn Łazaru, 1832.

## NAREKATSI

*Narek. Matean olbergut'ean S. Grigor Narekac'ii*. Buenos Aires. Tpagrut'iwn St. Tēōk'mēčean, 1948.

## YEZNIK

*Eznkay Kołbac'woy Bagrewanday Episkposi Elc alandoc'*. Venetica. I surb Łazar. 1826.

*Eznik de Kołb : De Deo*. Ch. Mercier (ed.). Paris. Firmin-Didot, 1959.

*Arabic Texts :*

## AL-BIRUNI

*Al-Biruni's Book on Pharmacy and Materia Medica*. Edited with an English translation by Hakim Mohammed Said. Karachi. Hamdard National Foundation, 1973.

## AL-DINAWARI

*The Book of Plants of Abū Ḥanīfa ad-Dīnawarī : alphabetical section I-j*. Bernard Lewin (ed.). Uppsala. A.-B. Lundequistska Bokhandeln, 1953.

*Le dictionnaire botanique d'Abū Ḥanīfa Ad-Dīnawarī (Kitāb an-nabāt, de s à y)*. Muhammad Hamidullah (ed.). Cairo, Institut français d'archéologie orientale du Caire, 1973.

AVICENNA.

*Ibn Sīnā, Abū 'Al al-Ḥayṣain Ibn 'Abd Allāh : al-Qānūn fī'l ṭibb.*

The Bulaq edition of 1877. Rpt. Beirut. Dār Ṣādr Offset. ca. 1970.

HIPPOCRATES

*Kitāb Buqrāt fī ṭabī'at al-insān (Hippocrates : On the Nature of Man)*. J. N. Mattock (ed.). Cambridge. W. Heffer and Sons. 1968.

RHAZES

*Abū Bakr Muḥammad b. Zakarīyā al-Rāzī kitabu'l hāwī fī'l ṭibb.*

Vol. 21/1. *Simple Drugs*. Hyderabad, India, Osmania Oriental Publications Bureau. Osmania University, 1968.

IBN SARABIYUN. See Serapion.

*Cleveland State University.*

John A. C. GREPPIN.